

Work Order ID 157441

Wednesday, February 22, 2017 1:03:21 PM

157441

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Item ID: D2622-120C Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step Extrusion
Start Date: 2/22/2017 Start Qty: ~~120.00~~ **110** FEB 27 2017 ***120*** Cust Item ID:
Required Date: 3/14/2017 Req'd Qty: ~~120.00~~ ***120*** Customer:
Reference:

Approvals: Process Plan: DAS 73 9-89 Date: FEB 22 2017 Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2622	Rev C1

100	PURCHASING	0.00							DAS 73 9-89
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100

Purchasing

Purchasing

Memo

0.00

Issue P/O: 35430 a) Extrude as per Dwg D2622 Rev. Cb)
Material: 6061-T6 (QQ-A-200/8)c) Minimum yield tensile strength = 35
ksid) Minimum ultimate tensile strength = 38 ksi e) Minimum elongation =
8%f) Order at 120" longg) Bon L Canada Inc.

110 FEB 27 2017

110

Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging

Packaging

Memo

0.40

Ensure material certification is attached

123x 80174-20

120

QC18 In-Coming Inspection Material 0.00

120

QC

Quality Control

Memo

0.00

Check Pull test per Dwg D2622 for compliance page attached Check hardness
with Webster tester

123 17-04-25 CB DAS 9 9-89

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Item ID: D2622-120C Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Step Extrusion
 Start Date: 2/22/2017 Start Qty: 120.00 ***120*** Cust Item ID:
 Required Date: 3/14/2017 Req'd Qty: 120.00 ***120*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: WA03	0.00							
130									
Packaging	Memo	0.20							
Packaging	LOCATION : HALL								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	2.00							
Quality Control									

(121)
C S M **17/05/02**
PTO
→

17/5/4 **JD**

DAS
 21
 9-89

MAY 0 2 2017

Picklist Print

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Work Order ID: 157441

157441

Parent Item: D2622-120C

D2622-120C

Parent Item Name: Step Extrusion

Start Date: 2/22/2017

Required Date: 3/14/2017

Start Qty: 120.00

Required Qty: 120.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120CP *D2622-120CP* Extrusion		Purchased	No			110	Each	0.0000	1	120			
									**	<u>123x SPI74-20.</u>			

DQA:

Date:

2017-09-21



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

AUG - 9 2017

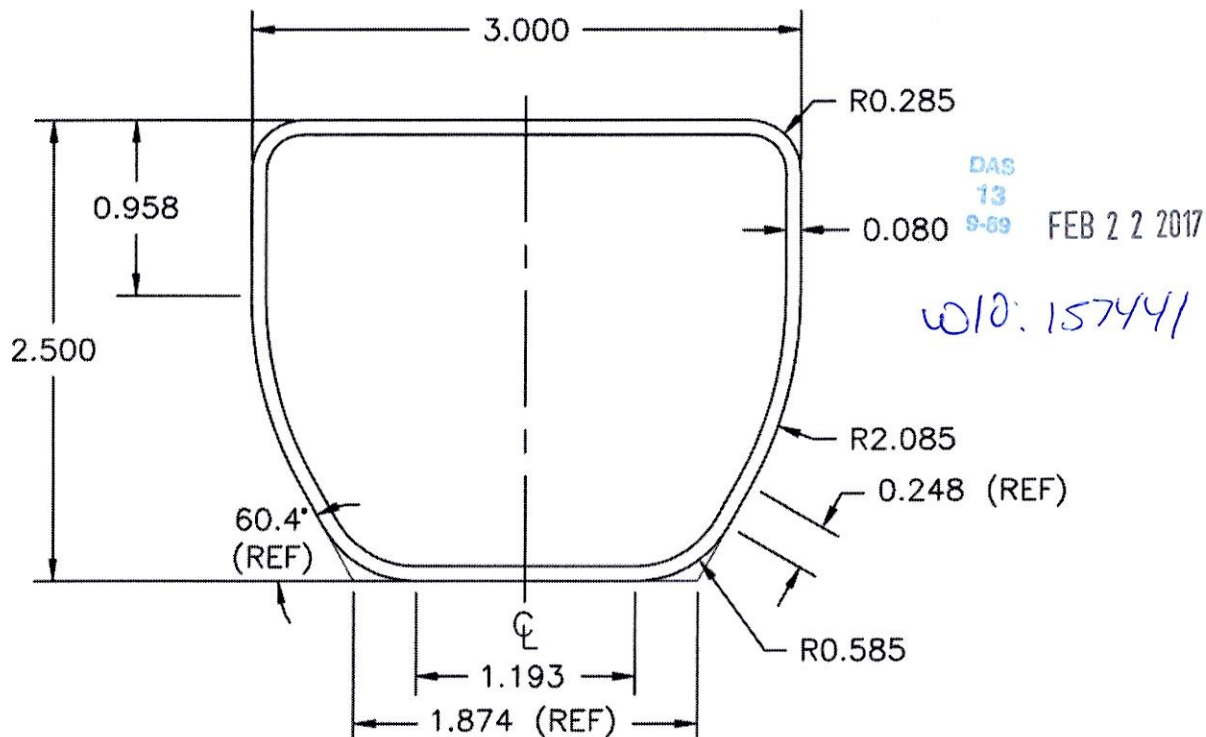
Work Order update only ☐

Work Order: <u>157441</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. <u>D2622-120C</u>		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. <u>17-6584</u>		Scrap ☒		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☒			
Date: <u>17-05-02</u>		Step #: <u>130</u>		QTY Effective: <u>2</u>			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition			DAS 9 9-89 17-05-02		
Damage found on extrusion				Scrap destroy			Completed By		
2.C. damage from packaging. Supplier				Damage is found in the center of step therefore can not be use for "short step"			CSM 17/05/02		
							Lead hand / Supervisor Approval Verification		
							DAS 9 9-89 17-05-02		
							QC / QA Coordinator Approval		
							DAS 9 9-89 17-05-02		
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☒	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☒	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							



DESIGN KE	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D2622	REV. C SHEET 1 OF 1
DATE 02.09.11		TITLE STEP EXTRUSION	SCALE 1:1
A	96.11.29	NEW ISSUE	
B	97.12.12	CHANGE MATERIAL, ADD TOL. QSI	
C	02.09.11	0.080 WAS 0.085; ADD PART & DIE No.	
CI	CP 02.10.04	ADD 'REV. A' TO DIE NUMBER.	

RELEASED
02-09-11 *off*



1) PART NUMBER IS D2622-XXX WHERE 'XXX' IS CUT LENGTH IN INCHES
(EG. D2622-120 IS 120" LONG)

2) MATERIAL 6061-T6 (QQ-A-200/8)

3) MANUFACTURED USING BON-L DIE # 897123 REV. A 

4) A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM ELONGATION = 8%

5) PART IS SYMMETRIC ABOUT CENTERLINE

6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

7) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35430

Purchase Order Date 2/27/2017

PO Print Date 2/27/2017

Page Number 1 of 2

Order From :

VC-BON001

SIGNATURE ALUMINUM CANADA INC.
C/O/ T10322C
P.O. BOX 4488, STN A
TORONTO, ON M5W 4H1
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FEB 28 2017

Contact Name

Vendor Phone 905-427-6550

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D2963-125P EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS OR DENTS. EXTRUDE AS PER DWG D2963 REV. A B156872	105 I Beam Extrusion	3/27/2017 Yes 3/27/2017		160.00 Each	\$10.40	\$1,664.00
Line Total:							\$1,664.00
2	D2622-120CP EXTRUDE AS PER DWG D2622 REV. C B157441	Extrusion	3/27/2017 Yes 3/27/2017		110.00 Each	\$24.52	\$2,697.17
Line Total:							\$2,697.17

Note:

2/27/2017



ACCT# 46024

1850 Clements Road, Pickering Ontario, Canada L1W 3R8 INVOICING AND COMPANY LOCATION

Phone: (866) 587-5780 Fax: (905) 427-2207

Visit us at www.signaturealuminum.comSIGNATURE ALUMINUM CANADA
1850 CLEMENTS ROAD
PICKERING ON L1W 3R8

PACKING LIST

PACKING LIST DATE / DATE DU
04-19-17PACKING LIST NUMBER / N° DE
031380SALES ORDER NUMBER / N° DE COM
127141

SHIP TO / EXPÉDIÉ À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

SOLD TO / VENDUE À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

ERMS / FREIGHT

PP

REFER TO
THESE NUMBERS ON
ALL CORRESPONDANCEREFEREZ-VOUS A CES
NUMEROUS POUR TOUTE
CORRESPONDANCE

LOCATION

PIC

TRAILER NUMBER /
REMORQUE Nombre

586941

SALESMAN /
VENDEUR

042

CREDIT REP / REP DU CRÉDIT

FIELD SALES REP / REP
REGIONAL DES VENTES

G.ATTENBOROU

SALES REP / REP. DES
VENTES

R. BLAIS

CUST SERVICE REP / REP.
SERVICE CLIENTELE

S1S

CUSTOMER ID / ID DU
CLIENT

46024

ORDER DATE / DE LA
COM

02/27/17

CUSTOMER PO NUMBER / CLIENT PO Nombre

PO35430

BILL OF LADING NUMBER / NO. DE CONNAISSEMENT

031380

JOB /
FICHIERCARRIER / TRANSPORTEUR
MCGILLION

ITEM NO. / NUMÉRO	ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL	UNIT / UNITÉ	PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée	MFG. PART NUMBER / MFG. PARTIE NUMÉRO	ALLOY & TEMPER / ALLIAGE & TEMPER	FINISH DESCRIPTION / DESCRIPTION DE FINITION	NBR OF PKGS / NBR DE PKGS	GROSS LBS / LIVRES BRUT	NET QUANTITY / QUANTITÉ NETTE	UNIT / UNITÉ	QUANTITY DUE / Quantité en raison
002	1,003	LB		DAA-897123-2	6061 T6		3	1,124	1,076	LB	
	455	KG		D2622-120CP	120.0000 IN			510	488	KG	
Y	110	PC			Cut(+):0.1180 Cut(-): 0.0000	Min: -10 % Max: 10 %			123	PC	
						880371 / 362321	1	128	115		13 PC
						880453 / 362786	1	489	472		54 PC
						880453 / 362787	1	507	489		56 PC

SPM-4-20

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping packing lists and signed and dated below by customers authorized representatives.
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping packing list were produced in accordance with the tolerance standards set at 1000 as specified. Order accepted subject to the terms and conditions stated on the reverse side.

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

Page 1 of 1

3	1,124	1,076	LB
	510	488	KG
		123	PC
TOTALS			

DATE OF DELIVERY

DRIVER

**SIGNATURE ALUMINUM CANADA**1850 CLEMENTS RD
PICKERING, ON L1W 3R8**CERTIFICATE OF COMPLIANCE**

Cert Date	Cert No.	Sales Order	Page
04/09/2017	5426323	127141	1
Cust PO	B/L No	Lot	Date
PO35430	031380	880371	04/19/17

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
002	DAA-897123-2	10FT MILL 6061 T6	D2622-120CP
Gross Weight	128 LBS		
Net Qty	115 LBS 13 PCS		1 PKGS
Specification			Die Desc
AMS-QQ-A-200/8 & ASTM B221-08			

Mechanical Tests:

<u>Tensile</u>	<u>Yield</u>		<u>Conductivity</u>	<u>HRE</u>
<u>MPA / KSI</u>	<u>MPA / KSI</u>	<u>% Elongation</u>		
307.6 / 44.6	285.6 / 41.4	9.0	N/A	93

Chemical Analysis:

<u>Si</u>	<u>Fe</u>	<u>Cu</u>	<u>Mn</u>	<u>Mg</u>	<u>Cr</u>	<u>Zn</u>	<u>Ti</u>	<u>V</u>	<u>Zr</u>
0.65	0.25	0.23	0.06	0.87	0.07	0.06	0.01	0.01	0.00

*This Material is Made in Canada**This Material is RoHS Compliant*

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta
Director of Quality
Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

Visit us at www.signaturealum.com

Rev A



SIGNATURE ALUMINUM CANADA

1850 CLEMENTS RD
PICKERING, ON L1W 3R8

CERTIFICATE OF COMPLIANCE

Cert Date	Cert No.	Sales Order	Page
04/12/2017	5426790	127141	1
Cust PO	B/L No	Lot	Date
PO35430	031380	880453	04/19/17

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
002	DAA-897123-2	10FT MILL 6061 T6	D2622-120CP
Gross Weight	996 LBS		
Net Qty	961 LBS 110 PCS		2 PKGS
Specification			Die Desc
AMS-QQ-A-200/8 & ASTM B221-08			

Mechanical Tests:

Tensile	Yield			
MPA / KSI	MPA / KSI	% Elongation	Conductivity	HRE
318.7 / 46.2	293.1 / 42.5	9.6	N/A	93

Chemical Analysis:

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	V	Zr
0.62	0.25	0.21	0.05	0.88	0.07	0.05	0.01	0.01	0.00

This Material is Made in Canada

This Material is RoHS Compliant

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

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Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

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Rev A

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D2622-120C
DATE: 17-04-23

PO / BATCH NO.: P0354307/B157441

MATERIAL CERT REC'D: yes
QUANTITY RECEIVED: 123
QUANTITY INSPECTED: 123
QUANTITY REJECTED: 0

THICKNESS ORDERED: .080
THICKNESS RECEIVED: .070
SHEET SIZE ORDERED: N/A
SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N	
CORRECT FINISH	☒ Y N	
CORROSION	Y ☒ N	
CORRECT GRAIN DIRECTION	☒ Y N	
CORRECT MATERIAL	☒ Y N	
CORRECT THICKNESS	☒ Y N	
PHOTO REQUIRED	Y ☒ N	
CORRECT MATERIAL	☒ Y N	
CORRECT REF # TO LINK CERT	☒ Y N	
CORRECT MATERIAL IDENTIFICATION	☒ Y N	
CORRECT M# ON THE MATERIAL	☒ Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N	

ASTM B721
P035430

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION

ENGINEERING SIGNOFF (if required)

INSPECTED BY: CB

SIGNED OFF BY: _____

DATE: 17-03-25

DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in